

REMARKS

Claims 1 to 20 are all the claims pending in the application, prior to the present Amendment.

The Examiner again requires that applicants file a substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a).

In response to applicants' argument that the specification is in proper idiomatic English, the Examiner sets forth two examples of what he considers to be non-idiomatic English in the specification. The two examples appear in paragraphs [0002] and [0051] of the specification. The Examiner identifies the second example as appearing in paragraph [0052] of the specification, but it appears in paragraph [0051] of the specification. Applicants have amended paragraphs [0002] and [0051] of the specification as set forth above.

In view of the above, applicants submit that the specification is in proper idiomatic English. Accordingly, applicants request the Examiner to withdraw the objection. If the Examiner identifies any other portion of the specification that requires correction, applicants will amend the specification to provide any correction that may be necessary.

Claims 1, 2, 5-7, 9-12, 15 and 17-20 have been rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,177,508 B1 to Ohmori et al, with further evidence provided by U.S. Patent No. 5,567,563 to Minami.

Applicants submit that Ohmori et al, as evidenced by Minami, do not disclose the subject matter of the present claims and, accordingly, request withdrawal of this rejection.

The present invention as set forth in claim 1 as amended above is directed to a powdered resin composition for slush molding comprising a thermoplastic polyurethane resin powder (B) as the main component and a fine particle powder (A) of a vinyl type copolymer comprising a

copolymer of an alkyl (meth)acrylate in a weight ratio of 99-70% and a polyhydric alcohol poly(meth)acrylate in a weight ratio of 1-30% and having a cross-linked structure as a powder flowability improver, wherein the fine particle powder (A) is not melted in the temperature range of 200 to 300°C, the resin powder (B) has a volume average particle diameter in a range from 70 to 300 µm and is capable of melting at 200 to 300°C, and the thermoplastic polyurethane resin powder (B) and the fine particle powder are dry-blended, wherein the fine particle powder (A) of a vinyl type copolymer is contained in an amount from 0.1% by weight to 1.5% by weight to the thermoplastic polyurethane resin powder (B).

Thus, applicants have amended claim 1 to state that the fine particle powder (A), which is a powder flowability improver, is a vinyl type copolymer comprising a copolymer of an alkyl (meth)acrylate in a weight ratio of 99-70% and a polyhydric alcohol poly(meth)acrylate in a weight ratio of 1-30%. Support for this amendment can be found in original claims 2 and 3. Applicants have canceled claims 2, 3, 13 and 14. In addition, applicants have amended claim 1 to state that the fine particle powder (A) of a vinyl type copolymer is contained in an amount from 0.1% by weight to 1.5% by weight to the thermoplastic polyurethane resin powder (B). Support for this amendment can be found in original claim 10 and at page 22, last four lines to page 23, line 3 of the present specification. Applicants have canceled claim 10.

Applicants have amended independent claim 5 to recite that the fine particle powder (E) is a vinyl type copolymer comprising a copolymer of an alkyl (meth)acrylate and a hydroxyl-containing vinyl type monomer. Support for this amendment appears at page 14, line 4 to page 15, line 3. Applicants have canceled claim 18. In addition, applicants have amended claim 5 to state that the fine particle powder (E) of a vinyl type copolymer is contained in an amount from

0.1% by weight to 1.5% by weight to the thermoplastic polyurethane resin powder (B).

Support for this amendment can be found in original claim 10 and at page 22, last four lines to page 23, line 3 of the present specification.

Applicants submit that Ohmori et al do not anticipate the present invention as recited in independent claims 1 and 5 because Ohmori et al do not teach the specific combination of the specific thermoplastic polyurethane resin powder (B) and the fine particle powder (A) (claim 1) or (E) (claim 5) of the present claims. None of the working Examples of Ohmori et al contain an example of a composition containing the combination of all of the components of the present claims, and Ohmori et al, therefore, do not anticipate these claims.

Applicants submit that Ohmori et al do not anticipate the present claims because Ohmori et al do not contain any example of a composition containing the combination of all of the components of the present claims, and the broad, general disclosure of Ohmori et al does not lead one to the specific combination set forth in the present claims from the many possible combinations of components disclosed by Ohmori et al.

Ohmori et al do not disclose all of the features of the presently claimed invention, especially those of the fine particle powder (A) and the fine particle powder (E), which are either of the vinyl type copolymer comprising a copolymer of an alkyl (meth)acrylate in a weight ratio of 99-70% and a polyhydric alcohol poly(meth)acrylate in a weight ratio of 1-30% (Claim 1), or the vinyl type copolymer comprising a copolymer of an alkyl (meth)acrylate and a hydroxyl-containing vinyl type monomer (claim 5), and both are including a cross-linked structure and not melted in the temperature range of 200-300°C.

Ohmori et al disclose suitable resins such as polyurethanes, polyimides, styrenic resins, polyamides, acrylic resins and epoxy resins, at col. 6, lines 21-23. A preferred resin of Ohmori

et al is a thermoplastic resin powder whose heat softening initiation temperature is 170-280°C, as described at col. 6, lines 31-34 at col. 6).

Ohmori et al disclose that exemplary of such resins are “polyurethanes, polyimides, styrenic resins, polyamides, acrylic resins and epoxy resins, as described in U.S. Pat. No. 5,567,563,” to Minami. See col. 6, lines 24 to 26 of Ohmori et al. However, Minami does not disclose or suggest the fine particle powder (A) or the fine particle powder (E), which are either of the vinyl type copolymer comprising a copolymer of an alkyl (meth)acrylate in a weight ratio of 99-70% and a polyhydric alcohol poly(meth)acrylate in a weight ratio of 1-30% (Claim 1), or the vinyl type copolymer comprising a copolymer of an alkyl (meth)acrylate and a hydroxyl-containing vinyl type monomer (claim 5), and both are including a cross-linked structure and not melted in the temperature range of 200-300°C.

In view of the above, applicants submit Ohmori et al do not anticipate the present claims and accordingly, request withdrawal of the rejection.

Claims 8 and 16 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,177,508 B1 to Ohmori et al in view of Patnaik (Patnaik, Pradyot (2003). Handbook of Inorganic Chemicals. McGraw-Hill.).

Claims 8 and 16 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,177,508 B1 to Ohmori et al in view of Patnaik.

Claims 8 and 16 are dependent claims that depend from independent claims 1 and 5, respectively. Applicants submit that claims 8 and 16 are patentably over Ohmori et al for the same reasons as discussed above in connection with the rejection of claims 1 and 5 over Ohmori et al. Patnaik does not supply the deficiencies of Ohmori et al.

In view of the above, applicants request withdrawal of this rejection.

Claims 3, 4, 13 and 14 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,177,508 B1 to Ohmori et al, with further evidence provided by U.S. Patent No. 5,567,563 to Minami, and further in view of U.S. Patent No. 4,737,432 to Tanaka et al.

As discussed above, claims 3, 13 and 14 have been canceled. Thus, claim 4 is the only claim that remains subject to this rejection.

Claim 4 is a dependent claims that depends from claim 1. Applicants submit that claim 4 is patentable over Ohmori et al for the same reasons as discussed above in connection with the rejection of claim 1 over Ohmori et al. Minami and Tanaka et al do not supply the above discussed deficiencies of Ohmori et al.

In view of the above, applicants submit Ohmori et al, Minami, and Tanaka et al do not disclose or render obvious the present claims and, accordingly, request withdrawal of the rejection.

Claims 1-6, 9-14 and 17-20 have been rejected under 35 U.S.C. 103(a) as being unpatentable over JP 02038453 to Kanetani et al, in view of U.S. Patent No. 4,022,849 to Jin et al.

The Examiner has provided an English translation of Kanetani et al, and refers to this translation throughout the rejection.

Applicants submit that Kanetani et al and Jin et al do not disclose or render obvious the presently claimed invention and, accordingly, request withdrawal of this rejection.

Kanetani et al disclose, in page 10, second paragraph of the translation, that polyvinyl chloride may be used, and that the amount thereof should be 10-300 ppw per 100 ppw polyurethane resin. This amount of 10-300 ppw per 100 ppw polyurethane resin, however, is

larger than the amount used for anti-blocking purpose, such as the amount employed with the fine particle powder that is used as a powder flowability improver in the powder composition of the present invention. The use of such a large amount of polyvinyl chloride in Kanetani et al can deteriorate the anti-blocking purpose and cause staining of the mold.

One of ordinary skill in the art reading the disclosure of Kanetani et al, therefore, would not think that the polyvinyl chloride of Kanetani et al is used as a powder flowability improver, and would not be led to using it in the amounts recited in claims 1 and 5.

Jin et al also do not teach that a crosslinked resin powder can be used as a powder flowability improver.

The present invention uses the resin powder (A) or (E) as a powder flowability improver, and the amount is from 0.1 % by weight to 1.5 % by weight of the resin powder (B), as set forth in claims 1 and 5 of the present application.

Jin et al teach that the amount of crosslinked vinyl halide copolymer added is a result-effective variable with respect to such properties as fire retardancy. Jin et al teach that the amount of the crosslinked vinyl halide copolymer that is added should be 5 to 50% of the total weight of the polyblend that is formed from blending with another polymer. One of ordinary skill in the art might be led to optimizing the amount within the specific ranges disclosed by Jin et al for the purposes of Jin et al, but would have no reason to optimize amounts outside of the range of Jin et al, especially for a purpose not disclosed by Jin et al. Jin et al do not disclose or suggest the use of a the resin powder (A) or (E) as a powder flowability improver in an amount of from 0.1 % by weight to 1.5 % by weight of the resin powder (B), as set forth in claims 1 and 5 of the present application.

Further, Kanetani et al clearly disclose the amount that can be used in their invention, but the specific purpose of use as a powder flowability improver according to the present invention is not taught by Kanetani et al and Jin et al, and the result to be achieved is unknown. Accordingly, even if a result effective variable may be optimized, a variable to achieve an unknown result would not be optimized. One of ordinary skill in the art optimizing the amount in Kanetani et al would optimize the amount within the range disclosed by Kanetani et al and would have no reason to modify that amount outside the range taught by Kanetani et al for a purpose that is not disclosed by Kanetani et al.

In summary, the amount of polyvinyl chloride in Kanetani et al is too high for a flow improver. Further, Jin et al disclose an amount that can be as low as 5%, but Jin et al do not disclose or suggest a flow improver or an upper amount of 1.5% as set forth in amended claims 1 and 5.

In view of the above, applicants submit that Kanetani et al and Jin et al do not disclose or render obvious the presently claimed invention and, accordingly, request withdrawal of this rejection.

Claims 8 and 16 have been rejected under 35 U.S.C. 103(a) as being unpatentable over JP 02-038453 to Kanetani et al, in view of U.S. Patent No. 4,022,849 to Jin et al, as applied to claims 1 and 5 above, and further in view of U.S. 2003/0098114 A1 to Samurkas et al.

Claims 8 and 16 are dependent claims that depend from independent claims 1 and 5, respectively.

Applicants submit that claims 8 and 16 are patentable over Kanetani et al and Jin et al for the same reasons as discussed above in connection with the rejection of claims 1 and 5 over these references. Samurkas et al do not supply the above discussed deficiencies.

In view of the above, applicants request withdrawal of this rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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Respectfully submitted,

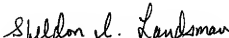
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